Stoke Therapeutics Enrolls First Patient in a Natural History Study of People Living with Autosomal Dominant Optic Atrophy (ADOA)

August 25, 2022

– ADOA is primarily caused by mutations in the OPA1 gene that result in progressive and irreversible vision loss in both eyes starting in the first decade of life –

– The FALCON study is designed to evaluate disease progression and its effects on patients –

– Data will support clinical development plans for STK-002, a potential new medicine that targets the underlying cause of ADOA –

BEDFORD, Mass.--(BUSINESS WIRE)--Aug. 25, 2022-- Stoke Therapeutics, Inc. (Nasdaq: STOK), a biotechnology company dedicated to addressing the underlying cause of severe diseases by upregulating protein expression with RNA-based medicines, today announced enrollment of the first patient in a prospective natural history study of people ages 8 to 60 who are living with autosomal dominant optic atrophy (ADOA). ADOA is the most common inherited optic nerve disorder. It is a rare disease that causes progressive and irreversible vision loss in both eyes starting in the first decade of life. There are currently no approved treatments for ADOA.

Most cases of ADOA are caused by mutations in one allele of the *OPA1* gene, which result in half of the normal OPA1 protein production. FALCON is a two-year prospective natural history study in patients who have a confirmed diagnosis of ADOA that is caused by an *OPA1* mutation. The study is designed to evaluate the rate of change in structural and functional ophthalmic assessments. Data from the FALCON study will support the clinical development of STK-002, Stoke's proprietary antisense oligonucleotide (ASO) in preclinical development for the treatment of ADOA.

"ADOA is a severe and progressive disease that, for many patients, leads to legal blindness," said Barry Ticho, M.D., Ph.D., Chief Medical Officer of Stoke Therapeutics. "There are currently no available treatments for ADOA. We look forward to partnering with the ADOA community and clinicians to learn more about this disease as we work to develop the first potential medicine to treat the underlying cause of ADOA."

"Understanding what causes ADOA is helping diagnose the disease earlier and is, for the first time, giving us the opportunity to develop medicines that may be able to slow or even stop vision loss in these patients," said Julie Falardeau, M.D., Professor of Ophthalmology and Neurology at Oregon Health & Science University School of Medicine. "We look forward to participating in the FALCON study and to generating data that will provide new insights into how the disease affects patients, which will be important as we study potential new treatments."

About the FALCON Study
FALCON is a multicenter, prospective natural history study of people ages 8 to 60 who have an established clinical diagnosis of ADOA that is caused by a heterozygous *OPA1* gene variant. No investigational medications or other treatments will be provided. The study is expected to enroll approximately 45 patients across 10 sites in the U.S., U.K., Italy and Denmark. Patients will undergo assessments at baseline, 6 months, 12 months, 18 months, and 24 months. There will be no additional follow-up period. For more information about enrolling in the study, please email Falconstudy@medpace.com.

About Autosomal Dominant Optic Atrophy (ADOA)
Autosomal dominant optic atrophy (ADOA) is the most common inherited optic nerve disorder. It is a rare disease that causes progressive and irreversible vision loss in both eyes starting in the first decade of life. Severity can vary and the rate of vision loss can be difficult to predict. Roughly half of people with ADOA fail driving standards and up to 46% are registered as legally blind. More than 400 *OPA1* mutations have been reported in people diagnosed with ADOA. Currently there is no approved treatment for people living with ADOA. ADOA affects approximately one in 30,000 people globally with a higher incidence in Denmark of one in 10,000 due to a founder effect.

About STK-002
STK-002 is a proprietary antisense oligonucleotide (ASO) in preclinical development for the treatment of Autosomal Dominant Optic Atrophy (ADOA). Approximately 80% of individuals with ADOA experience symptoms before age 10, typically beginning between the ages of 4 and 6. Stoke believes that STK-002 has the potential to be the first disease-modifying therapy for people living with ADOA. An estimated 65% to 90% of cases are caused by mutations in the *OPA1* gene, most of which lead to a haploinsufficiency resulting in 50% OPA1 protein expression and disease manifestation. STK-002 is designed to upregulate OPA1 protein expression by leveraging the non-mutant (wild-type) copy of the *OPA1* gene to restore OPA1 protein expression with the aim to stop or slow vision loss in patients with ADOA. Stoke has generated preclinical data demonstrating proof-of-mechanism and proof-of-concept for STK-002. STK-002 has been granted orphan drug designation by the FDA as a potential new treatment for ADOA.

About Stoke Therapeutics
Stoke Therapeutics (Nasdaq: STOK), is a biotechnology company dedicated to addressing the underlying cause of severe diseases by upregulating protein expression with RNA-based medicines. Using Stoke's proprietary TANGO (Targeted Augmentation of Nuclear Gene Output) approach, Stoke is developing antisense oligonucleotides (ASOs) to selectively restore protein levels. Stoke's first compound, STK-001, is in clinical testing for the treatment of Dravet syndrome, a severe and progressive genetic epilepsy. Dravet syndrome is one of many diseases caused by a haploinsufficiency, in which a loss of ~50% of normal protein levels leads to disease. Stoke is pursuing the development of STK-002 for the treatment of autosomal dominant optic atrophy (ADOA), the most common inherited optic nerve disorder. Stoke's initial focus is haploinsufficiencies and diseases of the central nervous system and the eye, although proof of concept has been demonstrated in other organs, tissues, and systems, supporting its belief in the broad potential for its proprietary approach. Stoke is headquartered in Bedford, Massachusetts with offices in Cambridge, Massachusetts. For more information, visit https://www.stoketherapeutics.com/ or follow Stoke on Twitter at @StokeTx.

Cautionary Note Regarding Forward-Looking Statements
This press release contains forward-looking statements within the meaning of the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995, including, but not limited to: enrollment in the FALCON study and the study’s ability to support Stoke’s clinical development plans; the timing and expected progress of clinical trials; Stoke’s ability to use study data to advance the development of STK-002; the ability of STK-002 to treat the underlying causes of ADOA; and the ability of TANGO to design medicines to increase protein production and the expected benefits thereof. Statements including words such as “believe,” “plan,” “may,” “expect,” “will,” “potential” or other similar words and statements in the future tense are forward-looking statements. These forward-looking statements involve risks and uncertainties, as well as assumptions, which, if they prove incorrect or do not fully materialize, could cause our results to differ materially from those expressed or implied by such forward-looking statements, including, but not limited to, risks and uncertainties related to: Stoke’s ability to advance its product candidates, obtain regulatory approval of and ultimately commercialize its product candidates; the timing and results of preclinical studies and clinical trials; the risk that positive results in a preclinical studies may not be replicated in subsequent studies or clinical trials or successes in early stage clinical trials may not be predictive of results in later stage trials; Stoke’s ability to protect its intellectual property; the direct and indirect impacts of the ongoing COVID-19 pandemic and its variants on the Company’s business; and other risks and uncertainties described under the heading “Risk Factors” in Stoke’s Annual Report on Form 10-K for the year ended December 31, 2021, its quarterly reports on Form 10-Q, and other documents it files from time to time with the Securities and Exchange Commission. These forward-looking statements speak only as of the date of this press release, and Stoke undertakes no obligation to revise or update any forward-looking statements to reflect events or circumstances after the date hereof.

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